

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/884,573	06/27/97	SWANSON	R 2500

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LM02/0602

EXAMINER

TUNG, K

ART UNIT	PAPER NUMBER
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2776

DATE MAILED:

06/02/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

884,573

Applicant(s)

Swanson

Examiner

K. Tang

Group Art Unit

2776

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 5-5-99
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-29 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☒ Claim(s) 6-21 is/are allowed.
- ☒ Claim(s) 1-5, 22-29 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other _____

Office Action Summary

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DETAILED ACTION

1. The amendment filed 5/5/99 has been considered in preparing this Office action.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 22-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted Prior Art, Fig. 1 of the drawing (hereinafter "Prior Art") in view of Wang et al (5,745,739).

Prior Art teaches a system (Fig. 1) comprising a CPU (80); a display processor (60); a video controller (20); a CRT monitor (30); a bus (50); and a system memory (40) includes an address decoder (46) and a frame buffer portion (45). However, Prior Art fails to explicitly teach a remapping device for converting a first address to a second address. This is what Wang et al teaches. Wang et al teaches an address generator (136) for performing 2D virtual coordinate to linear physical memory address conversion. It is noted that the phantom port of present invention is nothing more than an address converter of prior art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Wang

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et al into the system of Prior Art in order to convert address from one kind to another and thus to more effectively access the frame buffer memory. Therefore, claims 1-3, 5, 22, 24-25 and 27-28 would have been obvious.

Claim 4 requires the phantom port has a span size equal to a power of two which would be obvious of, if not inherent to, due to the teachings of Wang et al because the size of the buffer is always equal to a power of two.

Claims 23, 26 and 29 are similar in scope to claim 4, and thus are rejected under similar rationale.

Response to Arguments

4. Applicant's arguments filed 5/5/99 have been fully considered but they are not persuasive.

Basically, applicant argues that the reference fails to teach a phantom port. However, as discussed in the detail rejection above, applicant's phantom port does nothing more than a conventional address conversion circuit for converting one address format to another, such as, converting from linear address to physical address as discussed at page 15, lines 19-26 of the instant application. Furthermore, this is also what applicant's claims claimed.

Applicant further argues that "there is no suggestion of any system of remapping between pixel coordinate space and memory address space using a phantom port" (bottom of amendment page 4). The examiner disagrees. At least Wang et al teaches the feature of remapping between pixel coordinate space and memory address space (col. 7, lines 21-34).

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Regarding claim 24, applicant argues that the prior art fails to teach a virtual frame buffer and generating a virtual address. Although Wang fails to teach a virtual frame buffer, Wang does teach to generate virtual address. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to modify the teachings of Wang because Wang teaches to generate virtual address and obviously the memory which referred to by the virtual address can be called virtual memory. Therefore, at least claim 24 would have been obvious by Wang as detailed above.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Responses

6. Responses to this action should be mailed to:
Commissioner of Patents and Trademarks

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Washington, D.C. 20231.

If applicant desires to fax a response, (703) **308-9051(52)** may be used for formal communications or (703) **308-5403** for informal or draft communications.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

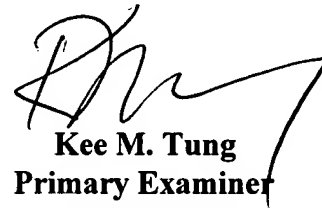
Inquires

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kee M. Tung** whose telephone number is (703) **305-9660**. The examiner can normally be reached on **Monday - Thursday from 7:30 am to 5:00 pm**. The examiner can also be reached on alternate **Friday**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Razavi**, can be reached on (703) **305-4713**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) **305-3800**.

May 27, 1999


Kee M. Tung
Primary Examiner
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